

What is claimed is:

1. A card-making method of making an authentication card from a raw card having a readable and writable information-storing portion formed therein, by forming an image on at least one of a front surface and a back surface of the raw card and writing individual authentication information in the information-storing portion,

the card-making method comprising the steps of:
writing processing information of the raw card in the information-storing portion;

forming the image based on the processing information read from the information-storing portion;
and

writing individual authentication information of the authentication card in the information-storing portion after forming the image.

2. A card-making method according to claim 1, wherein the step of forming the image comprises the steps of:

overlaying an ink image-receiving sheet to a surface of the raw card,

printing the image on the ink image-receiving sheet by using a sublimable dye ink after the overlaying step, and

thermally transferring the sublimable dye ink from the ink image-receiving sheet onto the surface of the raw card by heating the ink image-receiving sheet after the printing step.

3. A card-making method according to claim 1, wherein the step of forming the image comprises the steps of:

printing the image on an ink image-receiving sheet by using a sublimable dye ink, overlaying the ink image-receiving sheet to a surface of the raw card after the printing step, and thermally transferring the sublimable dye ink from the ink image-receiving sheet onto the surface of the raw card by heating the ink image-receiving sheet after the overlaying step.

4. A card-making method according to claim 2, wherein the processing information is printing process information, and

wherein the step of forming the image includes controlling printing operation in the printing step, based on the printing process information.

5. A card-making method according to claim 4, wherein the printing process information comprises at least one of printing resolution information for printing operation, front/back-surface printing information for identifying a to-be-printed surface of the raw card, and forward/backward printing information for identifying forward and backward ends of the raw card.

6. A card-making method according to claim 2, wherein the processing information is thermal treatment information, and

wherein the step of forming the image includes controlling heating operation performed in the step of thermally transferring the sublimable dye ink, based on the thermal treatment information.

7. A card-making method according to claim 6, wherein the thermal treatment information comprises at least one of heating information consisting of a heating temperature and a heating time period of the

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heating operation, and storage portion type information for protecting the information-storing portion from being heated.

8. A card-making method according to claim 7, wherein the heating temperature and the heating time period are set by taking a temperature gradient into account.

9. A card-making method according to claim 7, wherein the storage portion type information comprises information of a position of the information-storing portion in the raw card.

10. A card-making method according to claim 1, wherein the step of writing and individual authentication information includes rewriting the processing information to the individual authentication information.

11. A card-making method according to claim 1, wherein the individual authentication information comprises card-making information including a date of making of the authentication card.

12. A card-making method according to claim 1, further including the step of storing the processing information as history information of the authentication card prior to the writing step..

13. A card-making method according to claim 1, further including the step of writing source identification information of the raw card in the information-storing portion prior to the step of forming the image.

14. A card-making method according to claim 13, wherein the source identification information comprises production information including a date of production of the raw card.

15. A card-making method according to claim 1, wherein the information-storing portion includes a processing information-storing portion for storing the processing information, and an authentication information-storing portion for storing the individual authentication information, which have been formed in the raw card, independently of each other.

16. A card-making method of making an authentication card from a raw card having a readable and writable information-storing portion formed therein, by forming an image on at least one of a front surface and a back surface of the raw card and writing individual authentication information in the information-storing portion,

the card-making method comprising the step of writing source identification information of the raw card in the information-storing portion.

17. A card-making method according to claim 16, wherein the source identification information comprises production information including a date of production of the raw card.

18. A card-making system for making an authentication card from a raw card having a readable and writable information-storing portion formed therein, by forming an image on at least one of a front surface and a back surface of the raw card and writing individual authentication information in the information-storing portion,

the card-making system comprising:

processing information-writing means for writing processing information of the raw card in the information-storing portion;

processing information readout means for reading

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out the processing information from the information-storing portion;

image forming means for forming the image on the raw card;

image-forming control means for controlling said processing information readout means and said image forming means; and

authentication information-writing means for writing individual authentication information of the authentication card in the information-storing portion,

wherein said image-forming control means controls an image forming process carried out by said image forming means for forming the image, based on the processing information read from the information-storing portion.

19. A card-making system according to claim 18, wherein said image forming means includes:

a printer mechanism for printing the image on an ink image-receiving sheet overlaid to a surface of the raw card by using a sublimable dye ink, and

a thermal transfer mechanism for thermally transferring the sublimable dye ink from the ink image-receiving sheet onto the surface of the raw card by heating the ink image-receiving sheet after printing.

20. A card-making system according to claim 18, wherein said image forming means includes:

a printer mechanism for printing the image on an ink image-receiving sheet by using a sublimable dye ink,

an overlaying mechanism for overlaying the ink image-receiving sheet to a surface of the raw card after printing, and

a thermal transfer mechanism for thermally transferring the sublimable dye ink from the ink image-

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receiving sheet onto the surface of the raw card by heating the ink image-receiving sheet after completion of overlaying.

21. A card-making system according to claim 19, wherein the processing information is printing process information, and

wherein said image-forming control means controls printing operation carried out by said printer mechanism based on the printing process information.

22. A card-making system according to claim 21, wherein said printing process information comprises front/back-surface printing information for identifying a to-be-printed surface of the raw card,

wherein said image forming means includes a card-inverting mechanism for inverting the raw card upside down, and

wherein said image-forming control means controls said card-inverting mechanism based on the front/back-surface printing information.

23. A card-making system according to claim 21, wherein the printing process information comprises forward/backward printing information for identifying forward and backward ends of the raw card,

wherein said image forming means includes a card-rotating mechanism for reversing the raw card forward end backward, and

wherein said image-forming control means controls said card-rotating mechanism based on the forward/backward printing information..

24. A card-making system according to claim 21, wherein the printing process information comprises forward/backward printing information for identifying forward and backward ends of the raw card,

wherein said image forming means includes an image-rotating mechanism for reversing said image forward end side backward, and

wherein said image-forming control means controls said image-rotating mechanism based on the forward/backward printing information.

25. A card-making system according to claim 19, wherein the processing information is thermal treatment information, and

wherein said image-forming control means controls heating operation performed by said thermal transfer mechanism based on the thermal treatment information.

26. A card-making system according to claim 25, wherein the thermal treatment information includes storage portion type information for protecting the information-storing portion from being heated,

wherein said image forming means includes a heating prevention mechanism facing said thermal transfer mechanism, for preventing the information-storing portion from being heated, and

wherein said image-forming control means controls said heating prevention mechanism based on the storage portion type information.

27. A card-making system according to claim 25, wherein the thermal treatment information comprises storage portion type information for protecting the information-storing portion from being heated,

wherein said thermal transfer mechanism has a plurality of divisional heating sections which are capable of partially heating the card depending on a type of the information-storing portion, and

wherein said image-forming control means turns off only power for one of said divisional heating

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sections corresponding to the information-storing portion based on the storage portion type information.

28. A card-making system according to claim 18, further including history information storage means for storing the processing information as history information of the authentication card.

29. A card-making system according to claim 28, wherein said history information storage means is formed by a personal computer linked to said processing information-writing means.

30. A card-making system according to claim 18, further including identification information-writing means for writing source identification information of the raw card in the information-storing portion.

31. A card-making system according to claim 18, wherein the information-storing portion includes a processing information-storing portion for storing the processing information, and an authentication information-storing portion for storing the individual authentication information, which have been formed in the raw card independently of each other.

32. A card-making system according to claim 18, wherein at least said processing information readout means, said image forming means, and said image-forming control means out of said processing information-writing means, said processing information readout means, said image forming means, said image-forming control means, and said authentication information-writing means are accommodated in a single casing to form a card-making apparatus.

33. A heat treatment mechanism for applying heat treatment to a card having an information-storing portion arranged in part of a surface of a card body of

a card, by using a light source as a heating source, to thereby fix an image to the card,

wherein the heat treatment mechanism comprises a light-blocking plate which is arranged such that the light-blocking plate is positioned between the card and the light source to block irradiated light to the information-storing portion.

34. A heat treatment mechanism according to claim 33, including a light-diffusing plate interposed between the light source and said light-blocking plate, for diffusing the irradiated light from the light source.

35. A heat treatment mechanism for applying heat treatment to a card having an information-storing portion arranged in part of a surface of a card body of a card, by using a light source as a heating source, to thereby fix an image to the card,

wherein the heat treatment mechanism comprises a light-transmissive separation board arranged between the light source and the card, and

wherein said separation board has a mask portion provided in a manner associated with the information-storing portion, for blocking irradiated light to the information-storing portion.

36. A heat treatment mechanism according to claim 35, wherein said mask portion is a thin film formed by carrying out surface treatment by a dry process.

37. A heat treatment mechanism according to claim 36, wherein the thin film is formed by depositing a metal material on said separation board by a physical vapor deposition method.

38. A heat treatment mechanism according to

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claim 35, wherein said separation board is formed by a light-diffusing plate for diffusing the irradiated light from the light source.

39. A heat treatment mechanism according to claim 34, wherein said light-diffusing plate also serves as an optical filter for allowing only light in an infrared radiation wavelength range, out of the irradiated light from the light source, to transmit therethrough, and said light-diffusing plate is formed of heat-resistant glass in the form of a flat plate arranged in parallel with the card.

40. A heat treatment mechanism according to claim 33, wherein the light source is formed by a halogen lamp which emits far-infrared rays as radiation in a main wavelength range.

41. A heat treatment mechanism according to claim 33, wherein said card body has a surface thereof laminated with an ink image-receiving sheet having an image printed thereon by using a sublimable dye ink, and

wherein the heat treatment effects thermal transfer of the image from a portion printed with the image by using the sublimable dye ink, to the surface of the said card body.

42. A heat treatment mechanism according to claim 41, wherein the ink image-receiving sheet is laminated on a surface of said card body, except for the information-storing portion.

43. An image-forming apparatus for forming an image on a card having an information-storing portion arranged in part of a surface of a card body of the card, the image-forming apparatus comprising:

a printer mechanism for printing the image on an

ink image-receiving sheet by using an sublimable dye ink; and

a heat treatment mechanism for applying heat treatment to the card body and the ink image-receiving sheet printed with the image which are overlaid to each other, by using a light source as a heating source, to thereby fix the image printed on the image-receiving sheet to the card,

the heat treatment mechanism including a light-blocking plate which is arranged such that the light-blocking plate is positioned between the card and the light source to block irradiated light to the information-storing portion.

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